



City of Houston, Texas

*Report to Management for the
Year Ended June 30, 2005*

February 6, 2006

The Honorable Mayor, Members of
City Council and City Controller of the
City of Houston, Texas

In planning and performing our audit of the basic financial statements of the City of Houston, Texas (the "City") for the year ended June 30, 2005 (on which we have issued our report dated February 6, 2006), we considered its internal control in order to determine our auditing procedures for the purpose of expressing an opinion on the financial statements and not to provide assurance on the City's internal control. However, we noted a certain matter involving the City's internal control and its operation that we consider to be a reportable condition under standards established by the American Institute of Certified Public Accountants. Reportable conditions involve matters coming to our attention relating to significant deficiencies in the design or operation of the City's internal control that, in our judgment, could adversely affect the City's ability to record, process, summarize, and report financial data consistent with the assertions of management in the financial statements. The reportable condition we noted is described below.

Property

Finding—The City's accounting for property transactions does not appear to be a coordinated effort which has led to significant delays during the annual audit process. We noted instances in which the property subledger contained incorrect information, depreciation expense was incorrectly calculated and the property subledger was not reconciled to the City's general ledger system.

Recommendation—The City should perform a critical review of the information flowing in and out of the property subledger system and evaluate how this information should be reconciled to the general ledger of the City.

Response—Steps have been taken to remedy this situation. The City's Finance and Administration Department has employed an executive level individual to oversee a reorganized asset management division starting in June 2006 and recruited two new other staff members with fixed asset backgrounds from the private sector. As planned, we converted the General fund and the Convention Enterprise fund departments to AIIMS in FY05 from GFAMS. The AIIMS system is currently being used to capture the fixed assets additions, retirements, capital improvements and real estate subledgers to the General Ledger. The Aviation Department continued using the GFAMS system.

For the FY05 CAFR statement on Capital Assets, the F&A department was able to balance the AIIMS original cost amounts to the City's Balance Sheet accounts without any problem. However, it was discovered that the accumulated depreciation amounts were being calculated incorrectly on the converted FY04 data imported from GFAMS into the AIIMS system and additional time was needed to perform the calculations using Excel spreadsheets. Currently, depreciation for FY06 new additions are being calculated correctly and will be merged with the FY05 worksheets for the final FY06 CAFR amounts by departments and asset classifications.

After the FY06 CAFR statement is prepared, both the AIIMS and GFAMS programs will no longer be used to capture capital asset information. An Asset Accounting Module will replace them, which will be under the integrated umbrella of an Enterprise Resource Planning system called SAP. SAP will enable all City departments to create and control their capital assets entries with automated business processes within one system. The asset cost and depreciation amounts will be tied to GL balance sheet accounts through the integrated subledgers. Implementation of SAP will begin in July 2006 for FY07 asset transactions. The F&A, Fixed Asset Division is assisting with the SAP conversion. They are preparing the FY06 ending balances for the CAFR Capital Asset Statement and coordinating the FY07 beginning balance asset data files for SAP simultaneously.

Our consideration of the City's internal control would not necessarily disclose all matters in the City's internal control that might be reportable conditions and, accordingly, would not necessarily disclose all reportable conditions that are also considered to be material weaknesses. A material weakness is a reportable condition in which the design or operation of one or more of the internal control components does not reduce to a relatively low level the risk that misstatements caused by error or fraud in amounts that would be material in relation to the financial statements being audited may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions. The reportable condition described above is not believed to be material weaknesses.

We also submit our comments concerning certain observations and recommendations relating to other accounting, administrative, and operating matters. These recommendations resulted from our observations made in connection with our audit of the City's financial statements for the year ended June 30, 2005. Our comments are presented in Exhibit II and are listed in the table of contents thereto.

This report is intended solely for the information and use of the Mayor, City Council, management, and others within the organization and is not intended to be and should not be used by anyone other than these specified parties.

We will be pleased to discuss these comments with you and, if desired, to assist you in implementing them.

Yours truly,

Deloitte & Touche LLP

CITY OF HOUSTON, TEXAS

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REPORTABLE CONDITION**A. PROPERTY**

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OTHER ACCOUNTING; ADMINISTRATIVE AND OPERATING MATTERS

A. STALE BALANCES

Finding—The City has made great strides in researching stale balances, however, many balance sheet accounts still exist in which the balances have not changed for over one year.

Recommendation—The City should continue to perform a detailed review and analysis of accounts with stale balances.

Response—The Controller's Office staff along with Houston Airport System and Public Works and Engineering staffs continue to work aggressively to analyze and resolve existing accounts with stale balances.

B. CAPITALIZED INTEREST

Finding—Capitalized interest was recorded twice in the Combined Utility System Fund resulting in an understatement of interest expense of approximately \$24.6 million and no capitalized interest was assigned to the assets deemed substantially complete resulting in an adjustment of approximately \$14 million.

Recommendation—The City should establish policies and procedures to ensure that adjustments are not double recorded and that all year-end type adjustments are recorded.

Response—The Controller's Office will coordinate with City departments to ensure that capitalized interest and other fixed asset adjustments are not duplicated and that all fixed asset year end adjustments are recorded.

C. CAPITAL ASSETS

1. Compilation of Capital Asset Rollforward

Finding—The City converted its capital asset systems into one database, excluding capital assets in the Houston Airport System Fund in June 2005. The conversion in and of itself proved successful, however the City was not able to provide financial reports directly from the new Asset Information Management System ("AIMS") and depreciation expense calculated by AIMS was inaccurate causing the City to export the information into offline excel spreadsheets. Multiple rollforwards were provided during November 2005 to January 2006 before such rollforwards were appropriate. In addition, the excel spreadsheets were complex and were not prepared consistently between the general government and public works.

Recommendation—The City needs to establish standardized templates which ensure that information is presented in a consistent manner and that the final balances of all systems utilized in the property rollforward equals the sum of the respective systems for all property components.

Response—Steps have been taken to improve this situation. The city's Finance and Administration Department will be coordinating with the Public Works & Engineering Department a standardized format for the capital fixed assets property rollforward statements for the FY06 CAFR. All of the fixed asset sub ledgers detail records will be totaled and reconciled with the City Controller's balance sheet accounts for original costs and accumulated depreciation. This process has already begun which is part of the data conversion from AIIMS to the new SAP system. SAP will go live in July 2006 for FY07; all fixed assets including Houston Airport System will be included in the SAP database.

2. Reconciliation of Capital Outlay to Capital Asset Additions

Finding—The City is required, under the provisions of GASB Statement No. 34, *Basic Financial Statements—and Management's Discussion and Analysis—for State and Local Governments*, ("GASB No. 34"), to make adjusting entries related to capital outlay, which is expensed at a governmental fund level and capitalized at a government—wide level, in order to properly reflect the financial position of the City. The City maintains certain accounts that are to be used to track expenses that relate to capital assets, however, such accounts are not being used exclusively for this purpose, which creates difficulties in reconciling expenses incurred in the current year to additions in capital assets. During fiscal year 2005 the City made great strides in performing and improving this reconciliation process; however certain unreconciled differences still existed in fiscal year 2005.

Recommendation—The City should reevaluate current practices that are being utilized to capture and record capital asset information as compared to capital outlay expenditures.

Response—Steps have been taken to remedy this situation. During the FY06 closing schedule, asset purchases for the year will be reconciled between the AFMS system and the AIIMS fixed asset sub ledger system. Currently, the reconciliation process is extremely difficult due to the numerous systems that are not integrated. The SAP system that will be implemented in FY07 will resolve most of these problems with the asset reconciliation due to its system processes and complete departmental integration across the City.

3. Houston Area Water Corporation (HAWC) Contributions

Finding—The Combined Utility System Fund through contract is obligated to fund the project expansion of the HAWC. These contributions were reflected in a construction expense account used to track capital expenditures then capitalized into CIP, resulting in the capital asset being capitalized in the Combined Utility System and in the HAWC as HAWC is a blended component unit of the City. An audit adjustment of approximately \$18 million was recorded to correct the overstatement of capital assets and reflect the contribution as a transfer.

Recommendation—The City should ensure that contributions made to HAWC are properly accounted for and should perform a thorough review of expenses to ensure that expense coded to capital related accounts are appropriate.

Response—The capitalization of the HAWC project was an accounting error. The problem has since been corrected in the database used by the Capital Project group. Future contributions for construction purposes have been properly recorded as transfers.

D. MONITORING OF LIEN RECEIVABLES

Finding—The City has hired a third party to manage and collect outstanding lien receivables. The City does not appear to take an active role in ensuring that such lien balances or the related allowance for bad debts are fairly stated since the City receives the data from the third party with no supporting documentation. Through discussions that we had with the third party, we noted that the liens and the related allowances are kept and calculated manually and that the third party doesn't keep the back up support.

Background—The current accounting for lien receivables could result in the misstatement of liens receivable and their related allowance for uncollectible liens.

Recommendation—The City should take more responsibilities and a more active role in accounting for the liens and the related allowance for bad debts. In addition, the City should request the third party to keep the supporting documentation related to lien balances and make it available to the City upon such a request.

Response—The City will review the accounting and associated procedures including supporting documentation for lien receivables and their related allowance for doubtful accounts to ensure that they are adequate and are followed by the third party.

E. ACCOUNTS RECEIVABLE AND RELATED ALLOWANCE FOR DOUBTFUL ACCOUNTS

Finding—The City has improved its receivable analysis for certain receivables, however the allowance for doubtful accounts related to Municipal Courts are determined based on old historical collection data that has been carried forward for several years.

Recommendation—The City should establish policies and procedures for calculating the allowances based upon historical experience taking into consideration collections in recent years.

Response—The F&A Department, with support from the City Controllers Department, will review the current policy and procedures for calculating the allowance for doubtful accounts and consider using historical experience in the policy and procedures.

F. UNCLAIMED SALARIES

Finding—The City has approximately one million dollars in unclaimed wages recorded as a liability in the general ledger which should either be remitted to appropriate personnel or escheated to the State of Texas.

Recommendation—The City should establish procedures to track unclaimed salaries in order to ensure that the City properly remits such balances that should be escheated to the State within the appropriate time frame required by state law.

Response—The City will review the one million dollars in unclaimed wages currently recorded on the general ledger to determine the proper treatment. Procedures will be established to track and properly process unclaimed salaries.

G. RECORDING OF CONSTRUCTION CONTRACT REVENUE

Finding—The City enters into several construction contracts with parties that have agreed to reimburse the City for certain costs incurred for the related construction contract, particularly in the Combined Utility System Fund. Several audit adjustments were necessary to correct for the recording of the related revenue associated with these construction contracts as deferred revenue and a receivable were recorded at the time the Request for Council Approval was received and not based on the guidance as outlined in Statement No. 33, *Accounting and Financial Reporting for Nonexchange Transactions* of the Governmental Accounting Standards Board (“GASB”).

Recommendation—The City should develop and implement policies and procedures to compare the terms of the construction contract to the relevant accounting guidance and ensure that transactions are recorded appropriately.

Response—The City will review this process to ensure that the terms of the contract are appropriately accounted for in accordance with accounting guidance.

H. LEASE AGREEMENTS AND RELATED FOOTNOTE DISCLOSURE

Finding—The City enters into or modifies lease agreements on a regular basis. Several revisions were required to be made to the lease disclosure and one lease agreement pertaining to fire equipment was accounted for as an operating lease instead of as a capital lease.

Recommendation—The City should develop and implement controls to evaluate the terms of the lease agreements entered into or modified to ensure that the lease agreements are accounted for properly and tracked to ensure the terms of the lease agreements are adequately disclosed in the notes to the financial statements.

Response—The Controller’s Office will develop and implement controls and procedures to assist departments evaluate the terms of new lease agreements to properly account and track the terms of the lease agreements. The procedures will also include steps to properly classify the leases as operating leases or capital leases, thereby resulting in adequate disclosure in the notes to the financial statements.

I. WORKING TRIAL BALANCES

1. Preparation of and Adjustments to Working Trial Balances

Finding—The City prepares its working trial balances based on the period 13 close. Certain improvements were made by the City to record adjustments prior to the period 13 close; however a significant number of adjustments were still required to be posted to the working trial balances.

Recommendation—The City should review its year-end closing process and evaluate the adjustments posted after the period 13 close to determine the cause of such adjustments and if such adjustments can be processed prior to the period 13 close.

Response—The Controller’s Office continues to monitor its year end closing process to ensure necessary adjustments are recognized and recorded prior to the close of period 13 whenever possible. However, given the nature of certain adjustments, there will still be a need for the City to make some period 14 adjustments.

2. Timely Preparation and Review of Working Trial Balances

Finding—Certain improvements were made by the City to record adjustments prior to the period 13 close resulting in several of the working trial balances available for audit prior to their availability in the prior fiscal year, however the working trial balance for the Houston Airport System was not available until several weeks after its initial due date. In addition, a significant number of adjustments were still required to be posted to the working trial balance once provided for audit.

Recommendation—The City should review its year-end closing process and establish policies and procedures pertaining to the timeliness of the preparation of the working trial balances and review of accounts.

Response—Additional staff has been assigned to account reconciliations and analysis to be able to complete FY06 year-end requirements as scheduled. Many of the adjustments required after the working trial balance was initially provided for the audit for FY05 were one-time projects which required additional research and analysis. Houston Airport System personnel are reviewing all procedures for FY06 year-end closing to ensure timely completion of the working trial balance and other reports.

J. CASH FLOW STATEMENTS

Finding—Cash flow statements were initially inaccurate and required significant revisions by the Controller's Office.

Recommendation—The City has a standard cash flow template which should be reviewed for consistency among all funds and training should be provided to employees who are responsible for completing these cash flow statements.

Response—The Controller's Office is currently reviewing cash flow models to utilize in preparing the cash flow statements. The model will be used, if we determine that an accurate cash flow statement can be produced efficiently.

K. JOURNAL ENTRIES

Finding—Journal entries do not always include the preparer's signoff, initiator of the journal entry or complete documentation or audit trail.

Background—The lack of any of the above noted items could lead to the incorrect or purposefully misstated journal entries being posted by the City.

Recommendation—Ensure that all persons involved in the journal entry process are aware that the above noted items are necessary for complete documentation and internal control purposes.

Response—The City will ensure that all persons involved in the journal entry process are aware that the preparer's signoff, initiator of the journal entry, complete documentation and a proper audit trail are necessary for complete documentation and internal control.

L. WORKERS COMPENSATION ASSUMPTIONS

1. Large Claims

Finding—In the current analysis of the June 30, 2005, data, the City’s actuarial report identified nineteen large claims that were capped at current incurred values. The nineteen claims in the current analysis were assumed to not develop and represent approximately 60% of the medical case reserves for the entire self-insured program and approximately 55% of the total medical, indemnity and expense reserves for the entire self-insured program. The actuary has relied upon the City’s representation that the incurred amounts were appropriate as ultimate values for these large claims as the City utilizes a vendor, other than the third-party administrator to explicitly estimate the lifetime values of these large claims. Additionally, we noted that the List of Large Claims exhibits within the actuarial report can be misleading in that column (4) is titled “Specific Self-Insured Retention” when in fact none of these claims are in policy periods which have excess insurance coverage and therefore the self-insured retention is unlimited.

Recommendation—We recommend that the City’s actuary provide further analysis supporting the lack of development for these large claims and consider alternative analytical approaches, including analysis by loss layer, to better address the effect of the large losses. In addition, we recommend that the schedules be labeled appropriately.

Response—City management, which includes an actuary, discussed this issue with the actuary firm preparing the report and it seems there are two opinions on this issue—to develop or not develop the unusual large claims (that have emerged in the most recent valuation). The actuary firm developed to ultimate the non-19 large claims, and assumed that the 19 large claims have been established by expert claims adjusters at their best estimated ultimate value. Another opinion exists that such claims should not be limited but developed further. While this is a difference in opinion amongst actuaries, it is the actuary’s firm belief that their study of such large claims and approach is reasonable. However, the City will have additional review of the loss runs and should more recent loss runs indicate that these claims develop adversely, they will factor in subsequent analysis with data valued as of June 30, 2006.

Also, column (4) of the List of Large Claims exhibit is generically labeled “Specified Self-Insured Retention”: even if this did not apply, in subsequent reports the actuary firm will clarify this labeling.

2. Medical Reserves Assumptions and Disclosure

Finding—The City’s actuary selected loss development factors for the medical segment and the annual trend rate was selected based on the experience of other Texas municipalities rather than on the industry loss development pattern benchmark displayed in their report.

Recommendation—We recommend that the City’s actuary state in their report text and display in their report exhibits the external information needed to support their loss development factor and trend selections.

Response—For development and trend factors the actuarial firm reviewed the City’s own experience, industry (NCCI) patterns and other similar Texas entities they are familiar with. They relied on these and their actuarial judgment in selecting the development factors to incorporate in the analyses.

In subsequent reports, the actuarial firm will note and display external information to the extent they relied on it.

3. Changes in Third Party Administrators

Finding—Changes in third party administrators may affect the patterns of claim payment and claim reserving which are relied upon to actuarially project ultimate losses. These changes in claim handling can significantly affect projections of future ultimate losses.

Recommendation—We recommend that close monitoring of any changes in the loss data resulting from claims handling and administrative changes be performed to ensure the accuracy of future actuarial projections. This would normally include historical policy year diagnostic triangles of claim settlement rates and average severity trends which are not available in the City’s actuarial report. We recommend that the City’s actuary incorporate diagnostic triangles in their report.

Response—We are aware and acknowledge that changes in TPAs often result in potential changes in claims settlement and claims reserving patterns. These changes may affect the projection of future ultimate losses.

We have in the past met with the actuarial firm and the TPA to understand and be aware of the TPA changes. We will continue to examine these practices by the TPA, and the actuarial firm will teleconference with the TPA prior to concluding the analysis.

A recommendation was to review diagnostic tests of, for example, claims closure patterns. While the actuarial firm does look at some diagnostic tests for reserve changes (e.g., paid-to-incurred ratios), they will in subsequent reports request additional information such as claims closure rates from the TPA, to the extent such information is available.

4. Future Claim Handling Expenses

Finding—The City does not review or accrue for future claim handling expenses for claims which are incurred as of June 30, 2005, but are not closed or for claims which re-open. Typically, the ULAE reserve may be 5% of the associated loss and ALAE reserve, which would imply approximately \$3 to \$4 million, but the percentage may vary according to the particular circumstances of each self-insured.

Recommendation—We recommend that the City and/or the consulting actuary review the claim handling contracts to explicitly determine the City’s liability for Unallocated Loss Adjustment Expense (ULAE).

Response—ULAE liability generally needs to be recognized in the financial reports, unless the TPA fees are assumed to cover the cost of administering all claims for the lifetime duration of the open claims as of a certain date, say fiscal year-end. The report states that ULAE costs were not included in the report but provides a range of 5% to 10% of the outstanding liabilities that the City could recognize. While this may be an item to be accrued, the City does not discount the ULAE and therefore the future claim handling expense would be an offset. We defer to the Controller for guidance and see if this is consistent handling as in the past.

M. ADOPTION OF RECENT ACCOUNTING PRONOUNCEMENTS

Recent Pronouncements—In 2004, the GASB issued Statement No. 43, *Financial Reporting for Post-employment Benefit Plans Other Than Pension Plans*, (“Statement No. 43”), Statement No. 45, *Accounting and Financial Reporting by Employers for Post employment Benefits Other Than Pensions*, (“Statement No. 45”) and Statement No. 47, *Accounting for Termination Benefits*. Statement No. 43 establishes uniform financial reporting by state and local government entities for OPEB plans. This statement provides standards for measurement, recognition, and display of assets, liabilities, and, where applicable, net assets and changes in net assets of such funds and for related disclosures. This statement is effective for periods beginning after December 15, 2005 or July 1, 2006, for the City. Statement No. 45 addresses how state and local governments should account for and report their costs and obligations related to post-employment healthcare and other non-pension benefits (OPEB). The statement generally requires that state and local governmental employers account for and report the annual cost of OPEB and the outstanding obligations and commitments related to OPEB in essentially the same manner as they currently do for pensions. According to the phase in criteria, this statement is effective for periods beginning after December 15, 2006 or July 1, 2007 for the City. Statement No. 47 establishes accounting standards for termination benefits. This statement is effective for periods beginning after June 15, 2005 or July 1, 2005, for the City. For termination benefits provided through an existing defined benefit OPEB plan, the provisions of this statement should be implemented simultaneously with the requirements of GASB No. 45.

Recommendation—We recommend that the City evaluate the accounting and reporting implications related to the adoption of these standards and seek consultation from specialist as necessary.

Response—The City has already begun the evaluation of the accounting and reporting implications related to the adoption of these standards. In preparation for the implementation of GASB 45, the City commissioned a preliminary actuarial study for use as a planning tool in order to assist the City in estimating the actuarial costs of other post-employment benefits and formulating a GASB 45 implementation plan. An actuarial professional has also been hired to assist in the implementation of the standard. Most of the requirements of GASB 43 apply to OPEB plans that are funded and administered as trusts, or equivalent arrangements. The City’s plans are not funded, no impacts are expected from GASB 43. The City does not offer termination benefits covered by GASB 47, therefore, we do not expect any impacts to accounting or reporting.

N. BUSINESS CONTINUITY AND DISASTER RECOVERY

Finding—The City of Houston does not have a comprehensive Business Continuity Plan (BCP). Secondly, whilst a Disaster Recovery Plan (DRP) exists, where the Municipal Courts location has been designated as the recovery site, it has not been tested since 1998. In addition, as of the time of audit, the plan had not been updated to reflect that the Municipal Courts location and Public Works location are on different mainframe operation systems.

Background—In the event of an unplanned interruption to normal business operations, without a documented and tested business continuity plan and/or disaster recovery plan, the organization might not be able to restore critical business processes in a timely manner. A business continuity plan should help ensure continuity of critical business processes.

An untested DRP may have consequences. Testing of the plan ensures that flaws in the plan are identified and corrected, that costs of executing the plan are feasible and that resources used to support critical functions remain unchanged.

Recommendation—We understand that management is currently working to implement an enterprise wide Business Continuity Plan to ensure that critical business processes and information systems can be recovered within an acceptable time. Adequate training procedures should also be developed to ensure that all parties involved in the process understand their roles and responsibilities. The business continuity plan should be tested regularly and should address the following:

- Business Impact Analysis;
- Key computer processing locations;
- Application systems and user requirements for key business processes;
- End-user activities for key business processes;
- Telecommunications and networks;
- Key databases, information;
- Human resources; and
- Personal safety of employees and others.

The BCP and DRP could be separate documents or the BCP could incorporate the DRP. The fundamental difference between the two is that the DRP addresses the recovery of IT systems (including hardware, data and software) in order to ensure that business processes are resumed promptly, whereas the BCP addresses the resumption of key business processes, even if the IT systems have not been recovered. The BCP should therefore take into account procedures for manual processing.

Response—The Department of Information Technology working with the City's Technology Steering Committee is migrating from the mainframe to a client-server environment, which affords the opportunity to improve disaster recovery in a more economical manner than possible today. Three departments have completed this process, the Houston Emergency Center (HEC), with complete redundancy of IT capacity in a hardened facility, the Municipal Court, with a disaster recovery site at the Mykawa Facility and the Health and Human Services Department with completion of the disaster recovery assessment and plan last year. The IT Department plans to decommission the Municipal Data Center at 1400 Lubbock in the fall of 2007 and is implementing a server farm at the HEC to support the implementation of SAP to replace the current financial, purchasing, HR and payroll system. A back-up site will be implemented at 1400 Lubbock for these systems. The Houston Police Department is moving in this same direction with the acquisition of a new records management system to occur during FY07.

The City has also recently developed a Continuity of Government Plan, which augments the City's Disaster Recovery capabilities. During this transition period, expedited contract recovery services will be utilized in the event of system outages.

O. WINDOWS SECURITY

Finding—We noted that further measures could be taken to strengthen Windows security. We noted that the following settings could be strengthened:

- Password expires in 180 days
- Minimum Password length of 5 characters
- Account lockout after 5 bad attempts
- Password history of 2 passwords.

Background—The integrity of the applications and data residing on network servers primarily rely upon Windows security. If access to resources at the network level is not controlled, it could weaken the stability of the environment that could result in unauthorized or unintentional access to financial systems.

Recommendation—Management should ensure that more robust and restrictive configuration of access controls be implemented on all servers. Some suggested guidelines include:

- Passwords should be six or more characters long, an alpha/numeric combination, changed at least every 90 days, and not be repeated for at least five iterations
- Accounts should be removed after a period of inactivity
- Invalid userIDs or passwords should only be allowed to be submitted three times, before the access attempt is revoked and the ID, suspended
- Auditing should be enabled on all file servers to help increase the level of efficiency and effectiveness in monitoring systems. Reports should be generated and analyzed to ensure no security weaknesses have been introduced to the system and that the internal control structure surrounding the environments have not been compromised
- All accounts should require unique passwords and password should be enabled for complexity.

Response—Windows domain level auditing has been activated for domains supported by ITD. Local auditing has been turned on for specific servers of interest. Some domains increased password security to at least 6 characters and expiration intervals of 90 days, but not all. These modifications need to be done in phases because of workload impacts on our help desk. We need third party tools to analyze all the audit data effectively, because of the large number of servers and users. We are researching tools available on the market to facilitate this process. The current environment consists of several NT 4.0 domains, which limit our security management capabilities. The migration to Active Directory will improve our capabilities.

P. INFORMATION SECURITY

Finding—While Data Owners and Managers determine the segregation of duties of each employee; they do so without following any predetermined process to ensure that appropriate access rights are being assigned.

Background—Since there is no standardized process to assign employees' access rights, there is the possibility of compromising the segregation of duties, in particular when someone is changing job functions/departments.

Recommendation—A standardized and documented approach should be adopted that assists management in ensuring that appropriate segregation of duties is maintained when granting access to new or existing users.

Response—The implementation of the Enterprise Resource Planning system (SAP), SAP Human Resource Module, Active Directory, and Radius Servers will provide the ability to manage access rights to Applications based on employee data. This will allow citywide standardization of the processes. Current administration of security for various computer applications is standardized and there are several controls in place to ensure that segregation of responsibility is reviewed before granting new access or changing existing user access. The City will review current procedures to ensure compliance with established controls and make necessary revisions until the new tools are in place.

Q. CHANGE MANAGEMENT—DEVELOPMENT AND TESTING PROCEDURES

Finding—There are no formal documented procedures that outline the development and testing methodology for the City of Houston's IT department, only migration procedures are documented.

Background—Unapproved or erroneous changes could be implemented which could impair the availability, confidentiality and/or integrity of IT based information.

Recommendation—Standardize, document and implement policies and methodologies for the development and testing environment. Good documentation also facilitates the rotation of personnel, separation of duties, and continuity of operations in the event of turnover of key personnel. The policies should incorporate all affected users, including programmers, operators, and end-users.

Programming standards exist to help ensure the consistency of program development or maintenance activities across all programming projects of the organization. This helps achieve a number of objectives within the information systems function, including:

- consistency across programs,
- better cross-functional support,
- shorter learning cycles for new employees, and
- protection against the loss of any particular programmer.

Response—We are implementing a new Enterprise Resource Plan (ERP). Development and testing methodology are an integral part of the ERP development. Currently, we maintain consistency across programs by having designated personnel/programmers check any modifications made to programs and to ensure that appropriate comments and changes are identified clearly.

R. CHANGE MANAGEMENT—DEVELOPMENT ENVIRONMENT

Finding—Although a testing and production environment exists for mainframe modifications, there is no development environment.

Background—All modifications to IT systems should be developed and tested in an environment that is segregated from the production environment. If changes are developed and tested in the production environment, errors could be introduced to the production environment, systems could fail or act unpredictably. By not having a development environment, there is the risk of not having an appropriate or relevant testing environment that can replicate the production environment and provide an accurate assessment of the future change.

Recommendation—Consider establishing segregated development, testing and production environments, while simultaneously developing methodologies and approval policies to ensure the appropriateness of modifications and/or implementation of new systems.

Response—We are phasing out the mainframe over the next 7 months and no new development should take place. The mainframe replacement environment (client server) is already in place and has an established development environment. Since this audit, the City has implemented a new Mainframe system, storage facility, and a complete set of development, test, and production environments per the recommendations.

S. CHANGE MANAGEMENT POLICY

Finding—The Change of Management Policy only applies to the COBOL environment and there is no policy for the other applications and systems.

Background—Unauthorized or inappropriate changes may be made to the IT environment. The consequences of this include the following:

- Increased information systems costs
- Reduced benefit from investment in information systems
- Duplication of data and systems, with possible reconciliation problems
- Incompatibility of data and systems
- Increased support effort
- Inconsistent, unsatisfactory, or erroneous management reporting.

Recommendation—Develop and document a change of management policy that is applicable to all environments that are used for the operation of the City of Houston.

Response—There is a Change Management Policy for both COBOL and NATURAL programs in the IBM environment. The programmers use NATE application to migrate NATURAL programs from development to production environment. A Manager/Project leader must signoff on all COBOL and NATURAL program migrations. For other program environments and database changes, a Change Management process is in place with a document that outlines the changes, contingencies, risks and requirements, and requires approval from management.

T. BACKUP TAPE TESTING

Finding—Although the backup tapes are restored occasionally, there are no formal periodic backup readability tests of the IBM mainframe tapes. The readability of backup tapes is tested incidentally when data needs to be restored.

Background—Faulty system and/or data backup tapes may not be detected and unwarranted reliance may be placed on them. Backup tapes may become unreadable hence required data might not be available when needed.

Recommendation—Periodic tests for backup readability should be performed and should include data and system backups. These tests should be performed on a regular basis and should form part of the formal Disaster Recovery Plan.

Response—Per the recommendation, we will perform periodic samplings of stored media to verify its readability. These tests will be performed quarterly, unless the retention period or the cartridge shelf time warrants more frequent tests. Additional safeguards currently exist. The System, Test and Production saves are full volume saves performed weekly, monthly, quarterly and annually. Additional incremental saves capture any changed data since the last full save. The tape verification process is extensive. Creation of the initial Master file includes performing a disk-to-tape operation. In addition, we create a second Copy file using a tape-to-tape process, thus verifying the readability of the Master before it is used as the input for the copy. The Copy Tape is not verified in the same manner, however our current tape systems do a 'read-after-write' verification any time data is output to magnetic tape. This verification is done on the fly for all write operations. We have successfully restored information during a hardware failure because of this process. We will implement the recommended tests, which will further enhance our data recovery capabilities.